

# Denali-X Line

## X-Band GaN SSPA BUC

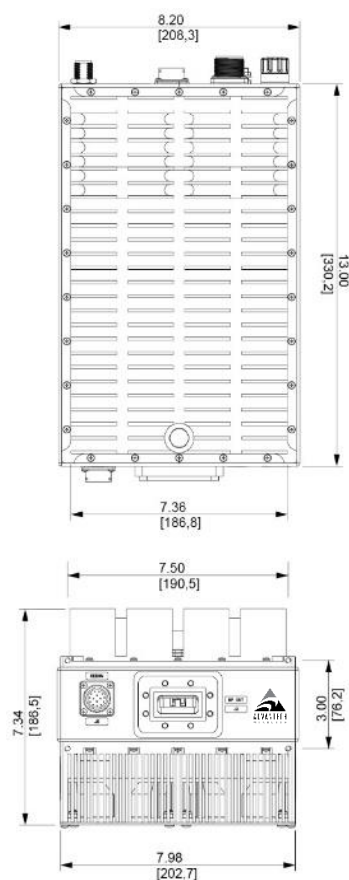
### Overview

An ideal solution for both mobile and fixed Communication terminals. The Denali-X Line SSPAs / BUCs are designed for high efficiency resulting in an optimal compact form factor with high performance and reliability. With the advanced customer interface and HTTP embedded web page, the operator is able to monitor and control the BUC and the System Redundancy.

- X-Band: 150W / 200W / 250W

### Features

- Compact size
- Available in AC
- Up to 250W of RF Output Power
- Up to 125W of Linear Power
- Built-in monitoring of critical parameters such as: RF power detection, mute control, over temperature shutdown, summary alarm
- IP55 rated housing and fan (weather proof construction)
- M&C Interfaces included: RS485, RS232, Ethernet and dry-contacts
- WEB interface and SNMP monitoring
- Redundant Ready
- 1:1 and 1:2 built into the BUC eliminating external controller
- Other frequency ranges available
- Internal 10MHz reference
- Optional output sample port
- Optional Remote control unit





## Denali-X Line GaN SSPA BUC

| Technical Specifications                   |   |                        |                                      |                 |                 |
|--|---|------------------------|--------------------------------------|-----------------|-----------------|
| X-Band                                     |   |                        |                                      |                 |                 |
| Electrical Characteristics                 | 150W  | 200W                   | 250W                                 |                 |                 |
| RF Output at P Sat                         | 52 dBm  | 53 dBm                 | 54 dBm                               |                 |                 |
| RF Output at P Lin                         | 49 dBm  | 50 dBm                 | 51 dBm                               |                 |                 |
| Output Frequency Range                     | 7.9 – 8.4 GHz   |                        |                                      |                 |                 |
| Input Frequency Range (BUC)                | 950 – 1450 MHz  |                        |                                      |                 |                 |
| Input Frequency Range (SSPA)               | 7.9 – 8.4 GHz   |                        |                                      |                 |                 |
| Local Oscillator Frequency                 | 6.95 GHz  |                        |                                      |                 |                 |
| Gain Stability Over Temperature            | ± 1.5 dB nominal  |                        |                                      |                 |                 |
| Gain Variation at fixed temperature        | ± 0.5 dB max over any 40 MHz;<br>± 2.0 dB over full band  |                        |                                      |                 |                 |
| Linear Gain                                | 70 dB min.  |                        |                                      |                 |                 |
| User Adjustable Gain                       | 20 dB in 0.5 dB steps   |                        |                                      |                 |                 |
| Spectral Re-growth                         | -30dBc @PLinear   |                        |                                      |                 |                 |
| Third order IMD (2 equal tones 5MHz apart) | -25 dBc, with 2 equal carriers (5MHz spacing) at 3dB total power back off from rated power (P Sat -3dB) |                        |                                      |                 |                 |
| 10MHz Reference                            | 0dBm ± 5.0 dB - External via IF / (Internal 10MHz reference optional)                                   |                        |                                      |                 |                 |
|  | @ 100 Hz  | @ 1 KHz                | @ 10 KHz                             | @ 100 KHz       | @ 1 MHz         |
| Ref Phase Noise Requirement                |   | -140 dBc/Hz max        | -150 dBc/Hz max                      | -155 dBc/Hz max |                 |
| Local Oscillator Phase Noise               | -63 dBc/Hz max  | -73 dBc/Hz max         | -83 dBc/Hz max                       | -93 dBc/Hz max  | -103 dBc/Hz max |
| Output Spurious                            | -60dBc max @PLinear   |                        |                                      |                 |                 |
| Harmonics                                  | -60dBc max @PLinear   |                        |                                      |                 |                 |
| AM/PM                                      | < 2deg/dB at PLin   |                        |                                      |                 |                 |
| VSWR                                       | Input (1:50:1) Output (1:30:1)  |                        |                                      |                 |                 |
| Power consumption                          |   |                        |                                      |                 |                 |
| X-Band                                     | 150W  | 200W                   | 250W                                 |                 |                 |
| Power consumption (Watts)                  | 900W  | 1000W                  | 1100W                                |                 |                 |
| Power requirement                          | 110-220 VAC   |                        |                                      |                 |                 |
| Interface                                  |   |                        |                                      |                 |                 |
| Output Interface                           | Waveguide, CPR 112G (Grooved)   |                        |                                      |                 |                 |
| Input Interface                            | N-Type Female, 50 Ohms, F-Type Female, 75 Ohms (optional)   |                        |                                      |                 |                 |
| Connectors                                 | AC Connector: MS3102R16-10P   | M&C: MS3112E14-19P     | Redundancy: MS3112E14-15P (Optional) |                 |                 |
| Mechanical                                 |   |                        |                                      |                 |                 |
| Cooling                                    | Forced Air  |                        |                                      |                 |                 |
| Dimensions (L x W x H)                     | 13 x 8.2 x 6.3 / 33.02 x 20.83 x 16   |                        |                                      |                 |                 |
| Weight                                     | 27.8 / 12.5   |                        |                                      |                 |                 |
| Environmental                              |   |                        |                                      |                 |                 |
|  | Temperature Range (ambient)   | Humidity               |                                      | Altitude        |                 |
|  | -40°C to + 55°C (operating)<br>-40°C to + 75°C (storage)  | 0 to 100% (condensing) |                                      | 10,000 ft ASL   |                 |

Ref.: PB-AWT-DMLg-X-19289-1

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